



**READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING**



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**MADE IN USA**

# GENERAL INFORMATION

- General: Remove the machine from packaging materials. Special care should be taken when installing. Do not disturb set preferences.  
Read and follow all operating and safety instructions.
- Power Supply: 10 HP Electric motor 220/460V 60 cycle, 3 phase (standard)  
Needs 100 amp breaker box - 60 amps running  
18 HP Briggs electric start engine (optional)  
20 HP Kubota diesel (optional)
- Hydraulic Info: Machine operates a 2,500 PSI hydraulic system with dual valve levers (standard safety feature) to control the 5" diameter 30" stroke cylinder. Oil reservoir has 28 gallons of capacity pumping at a rate of 28 GPM by a 2 stage hydraulic pump.
- Overview: The TC-100 is a trailer mounted unit intended to cut passenger, light truck and heavy truck tires including super singles.

## **WARNING - WEAR SAFETY GLASSES**

USE CAUTION! Machine is equipped with a powerful cutting bar.

Using gloves is advised as well as wearing hearing protection. Cut pieces of tires can have sharp edges and may be difficult to handle so overall attention to safety is required.

Keep machine free from debris. Using machine in a confined, messy area is dangerous. Make sure caution is used whenever machine is being operated.

Do not leave machine in use unattended.

## Primary Features

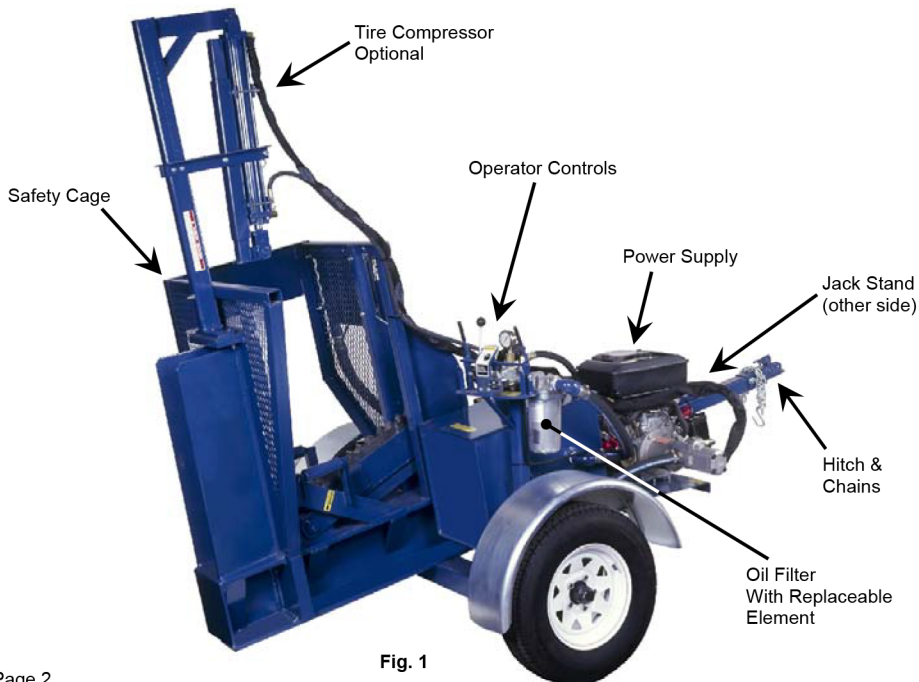
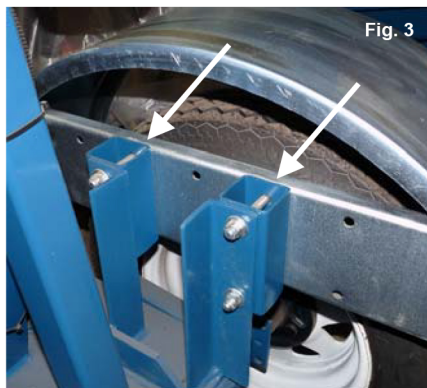
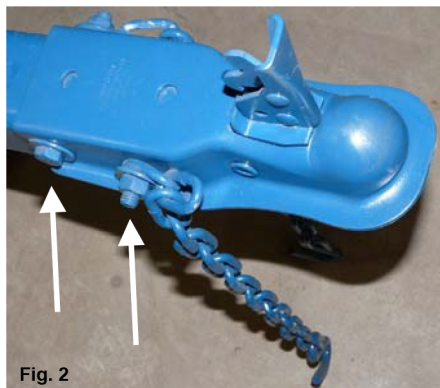


Fig. 1

## SET UP INSTRUCTIONS

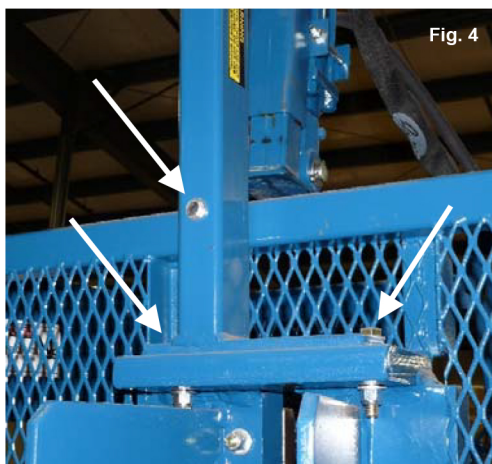
Bolt on hitch, safety chains and fenders if they aren't already mounted on the unit. Fasten optional Tire Compressor if ordered with unit. See Figures 2, 3 & 4.



Set-up on level ground detached from pulling vehicle. Establish the correct cutting position by tilting the unit at an angle so the back end of the I-beam rests firmly on the ground. Use the Jack mounted on the pulling tongue to tilt machine into the correct cutting position.

For electric units provide the power necessary to run the machine.

Once the unit has been assembled remove the oil plug from the Oil Tank and replace with the Oil Breather Cap. Store the plug and use whenever relocating the machine.



## OPERATING INSTRUCTIONS

### Electric units

Plug electric powered TC-100 into the appropriate power source listed on page 2 (of this guide) unless otherwise specified.

To turn on select START. To shut off select STOP.

### Gas and Diesel units

Turn fuel valve to open. For gas machine close valve when machine is not in use.

Follow manufacturers recommendations to start engine.

Check and maintain fluid levels prior to each start.

On all units:

As a safety feature running the machine requires two hand-levers to be used at once.

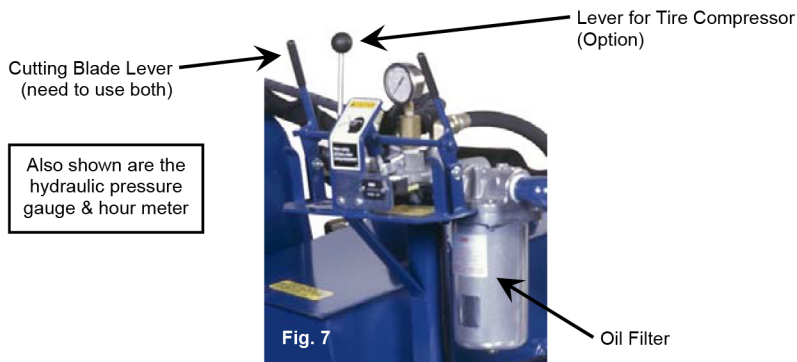
Hydraulic operating pressure is preset at 2500 PSI with a 2 stage, 28 GPM pump, a 28 gallon reservoir and a 5" diameter x 30" stroke cylinder.

Optional tire compressor cylinder is 2-1/2" diameter x 24" stroke.

Make sure the hydraulic hoses and fittings don't leak. Check periodically when using the unit. When first using the machine cycle it a couple times making sure there's no leaks and everything is running normal. Tighten fittings if necessary and use Teflon tape where applicable.

To roll tires into shearing area place the tire ramp as shown in Fig. 5 over the bolts for the roller. Roll the tire on the ramp as shown in Fig. 6.

For passenger and light truck tires use the tire compressor. (Explained on page 5.)



Operator Controls

The TC-100 is equipped with a detent valve system. Pull both cutting blade levers toward you to activate cutting arm. If one or both levers is let-go of the cutting arm stops moving. To use detent push both levers forward so the cutting arm returns to an 'open' position.

Once a tire is in position for cutting, cut the tire with the cutting arm using the operating levers. See Fig. 7. Rotate the tire in the cutting area 180 degrees to halve it, put both pieces back into the machine and cut them again, giving you four pieces.

Clear the area after each cut and do not attempt to cut tires when there's too much debris around the unit.

Apply grease to cutter blades (male and female cutting bars) if you hear squeaking. Do this before trying to adjust them.

Using the tire compressor is primarily for passenger or light truck tires. The purpose is to compress the whole tire in the cutting area and cut through an entire tire in one cutting pass. Then stack the two pieces in the cutting area and cut them once more.

To use remove the hitch pin and pull the cutting attachment forward. *Re-install the pin and hitch pin and use to re-attach when stowing out of the way and going back to truck tires.*

Place a tire in the cutting area. Cycle the tire compressor cylinder with the tire compressor lever (Fig. 7) and squish the tire. Use the cutting levers to cut the tire once, into two pieces.

Retract the tire compressor and stack the two tire pieces in the cutting area, then cut them both at the same time with the cutter arm.

Continue use with machine as necessary.

**KEEP MACHINE CLEAN AND FREE OF DEBRIS  
DON'T WEAR LOOSE CLOTHING**

Machine maintenance is vital to maintain its accurate cutting ability. If parts on the machine are broken, damaged or loose it CAN cause damage to a tire.

Address those situations promptly.

TSI is not responsible for careless operation and use of these machines or the damage that could incur due to improper use and operation.

## TC-100 MAINTENANCE

**SHUT OFF OR UNPLUG MACHINE FOR MAINTENANCE**

- After running the machine for 10-15 hours adjust shear blades. See page 6.
- Follow engine manufacturers recommended maintenance requirements. Replace engine oil, oil filter, air filter and gas filter every 6 months.
- Replace Hydraulic oil filter element TSI# 10130E every 100 hours or 6 months. See page 4 Fig. 7.
- Drain and replace Hydraulic oil from reservoir once per year with SAE 20 or SAE 30 Automatic Transmission Fluid.
- Grease unit weekly: At minimum follow directions as stated on decals.
- Visually check all the hydraulic hoses and fittings each time the TC-100 is used. Monthly check the hoses and fittings for wear and/or leaks. If a hose is damaged or worn too much replace it.
- When replacing a hose or fitting always use Teflon tape, tighten and test for leaks until none appear.
- Replace light bulbs if necessary.

**CAUTION:** When providing maintenance to any of these machines stay clear of all moving parts.

**NOTE:**  
Extra stress is placed on machine if proper sharpness or adjustment is not maintained.



Fig. 9

At left the length of the male shear bar is in contact with the female shear bar - full length.

1/2" Bolts

1/2" Socket Head Screws & Locking Nut

Female Shear Bar

Male Shear Arm

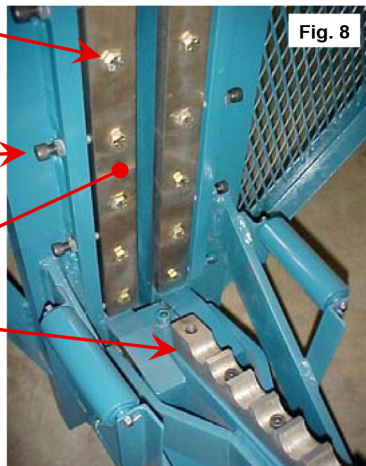


Fig. 8

### Female Shear Bar Adjustment: (See parts in Fig. 8)

As the steel belting from a tire starts to string out and not cut properly the original bar edges will eventually need to be adjusted.

To do this run the unit and stop the Male Shear Arm in position as shown in Fig. 9. Shut off or unplug the unit.

Loosen the 1/2" Bolts on one side of the unit and loosen the Lock Nuts for the Socket Head Screws. Use an Allen Head wrench to adjust the Socket Head Screws to drive the Female Shear Bar securely flush against the Male Shear Arm (do not add force upon it) and tighten the Lock Nuts. Do this for both sides. There should be zero clearance between the Male and Female Shears.

### Changing the Female Shear Bars:

Each Female Shear Bar has 4 available cutting edges. Run the unit and stop the Male Shear Arm in position as shown in Fig. 9. Shut off or unplug the unit.

Remove the 1/2" Bolts from both sides as well as both Female Shear Bars. Loosen the Locking Nuts and back-out the Socket Head Screws so there's access to clean the mounting surface. Use a putty knife and emery cloth to scrape the mounting surface as clean as possible.

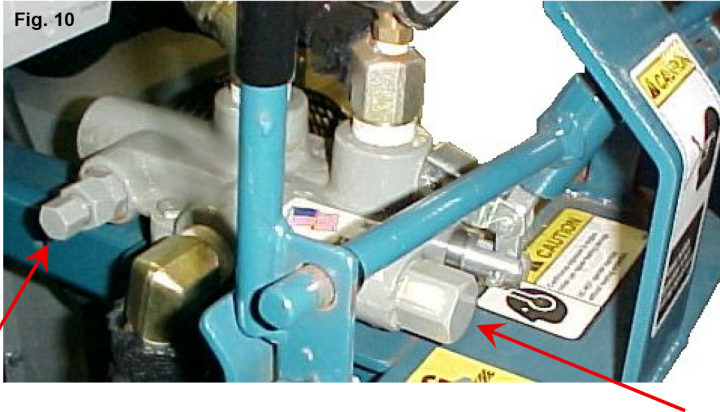
Reposition each Female Shear Bar by choosing a newer edge to use for cutting and loosely replace all the 1/2" Bolts. Make the proper adjustments to align each Female Shear Bar to the Male Shear Arm as stated above.

### Maintaining the Male Cutter Bar:

The Male Cutter Bar may be turned end for end if it shows areas of wear. After rotating it make sure to readjust the Female Shear Bars as stated above.

*For replacement shear bars call in advance so you don't have any down-time!*

## Hydraulic Pressure Adjustment



If valve "kicks out" on the shear arm return stroke, the detent will have to be slightly tightened. Tighten outer nut 1/4 turn and tighten lock nut. Continue to cut. If valve still "kicks out" readjust it another 1/4 turn.

Hydraulic pump pressure at the valve is to read 2600-2800 PSI on the gauge. If pressure adjustment is needed, remove the cap and either loosen or tighten adjusting nut beneath the cap.

## MAINTENANCE LOG

## Dimensions and Capacities

Size: 9'6" long x 7' 6" high (with tire compressor) x 5'6" wide

Weight: 3,500 pounds

Tire Compressor weighs approx 300 pounds

### Tire Compressor Option



Fig. 11



Fig. 12

To install bolt it onto the frame (3 bolts) and fasten the two hydraulic hoses to the control valve already

[www.tsissg.com](http://www.tsissg.com)

## TC-100 TIRE CUTTER



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